AMANO®

AGP-2000 Series

Ticket Dispenser

INSTALLATION / OPERATIONS MANUAL

Amano Cincinnati, Inc. reserves the right to make equipment changes and improvements which may not be reflected in this document. Portions of this document may have been updated to include the latest hardware or firmware version, if applicable.

We recommend that this document be read in its entirety before any attempt is made to operate the equipment.

PROPRIETARY NOTICE

This document contains proprietary information and such information may not be reproduced in whole or in part without written permission from Amano Cincinnati, Inc., 140 Harrison Avenue, Roseland, New Jersey, 07068

TABLE OF CONTENTS

Chapter 1: INTRODUCTION 1-1

Chapter 2: SPECIFICATIONS 2-1
- Pedestal 2-1
- Electrical 2-1
- Standard Features 2-2
- Cabinet Design 2-4
  - Upper Mechanism 2-4
  - Lower Mechanism 2-5

Chapter 3: INSTALLATION 3-1
- Prepare the Unit 3-1
  - Unpack the Unit 3-1
  - Remove the Skid 3-1
- Mounting the AGP-2000 3-2
- Electrical Connections 3-3
  - Main Power 3-3
  - Connection Locations 3-4
  - Communications Wiring 3-5
    - Termination Resistors 3-5
  - Field Connections (24 VDC) 3-6
  - I / O Rack #1 Connections 3-7
  - I / O Rack #2 Connections 3-8
  - Typical Input / Output Modules 3-9
  - AGP-2000 Connections to an AGP-1700 Gate 3-10
  - AGP-2000 Connections to an AGP-1700 Gate and MAG-120 Reader 3-11
  - AGP-2010 Schematic 3-12
- Loading the Ticket Supply 3-13
- Intercom Wiring 3-14
- Complete the Installation 3-14

Chapter 4: SERVICE 4-1
- Door Open Switch 4-1
- Ribbon Replacement 4-2
- Ticket Jam 4-3
- Ticket Restocking 4-4
- Issuing Lost Tickets 4-6
- Emptying the Ticket Vault Bin 4-6
- Preventative Maintenance 4-7
- Servicing the PCBs 4-8
- System Reset 4-9
  - Program Reset 4-9
  - Clearing the Ram 4-9

Chapter 1: INTRODUCTION

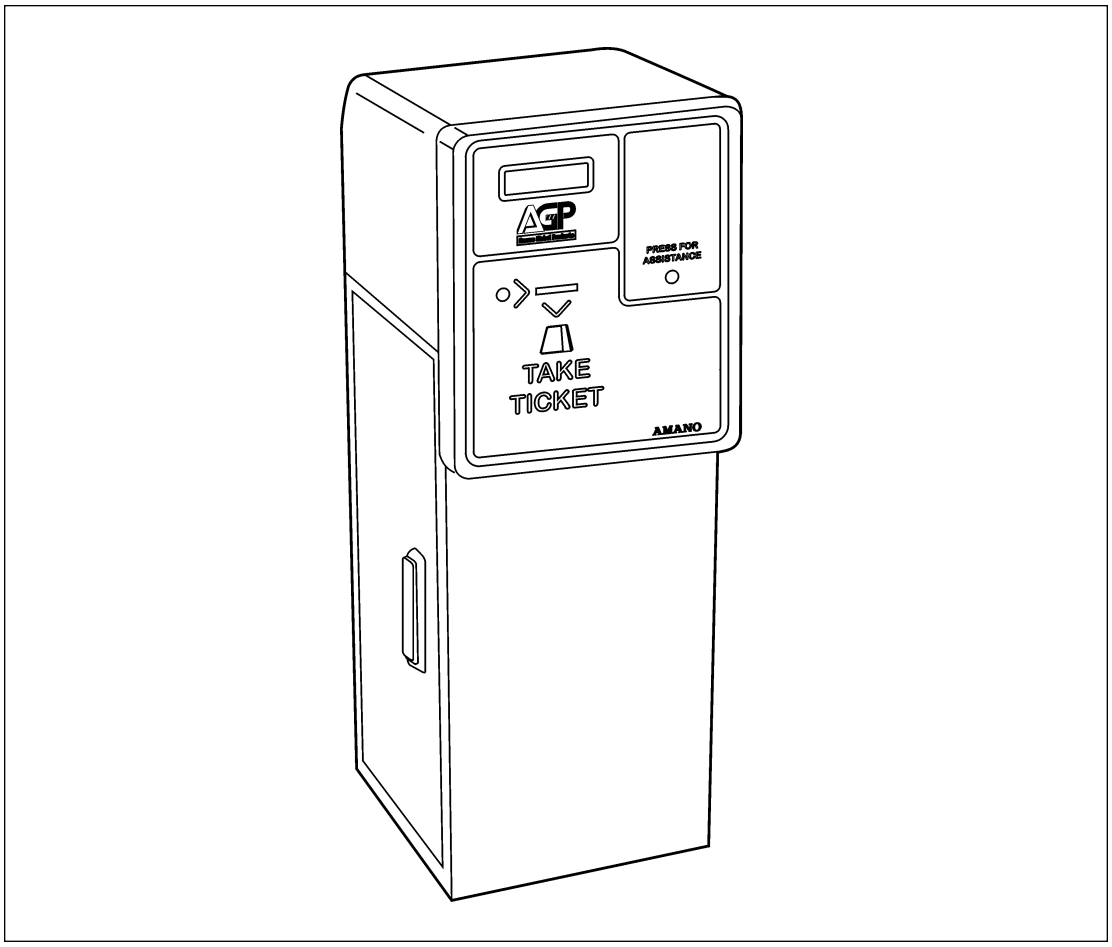


Figure 1-1, The AGP-2000 Ticket Dispenser

The AGP-2000 Ticket Dispenser is designed for multiple uses at unattended entrances of a parking facility. In its traditional application, the AGP-2000 is installed at an entrance to automatically dispense a parking ticket with the date, time, ticket number, machine number and rate code printed and magnetically encoded on the ticket. The issuance of a ticket can be done either automatically, via an arming loop; semi-automatically through the use of an arming loop and the push button; or manually through the push button. Once the ticket is retrieved from the ticket dispenser by the parking patron, the AGP-2000 opens the gate, allowing the patron to enter the facility.

The AGP-2000 can also be configured to accept magnetically encoded contract or monthly passcards to enter the lot. The patron inserts the passcard into the ticket throat to be read. The AGP-2000 reads the passcard and returns it to the patron.

The AGP-2000 features standard communications ability that can be operated in an on-line mode of operation or a non-communicating stand alone operation. The machine features a backlit LCD display and user recordable voice prompts to provide patron instructions and programming information.

Chapter 2: SPECIFICATIONS

Pedestal

Size: 49 1/2” (126 cm) high x 17 3/4” (45 cm) wide x 21” (53 cm) deep
Throat: 38 3/4” (98cm) high
Weight: 135 lbs. (61 kg)
Service: Polyethylene cover over top mechanism. Door panel on left side of pedestal. Weather gaskets at all access points.
Housing: Heavy duty 12 gauge steel
Finish: Yellow (RAL#1028) or White Pedestal Base standard. Custom colors available. Grey top cover.

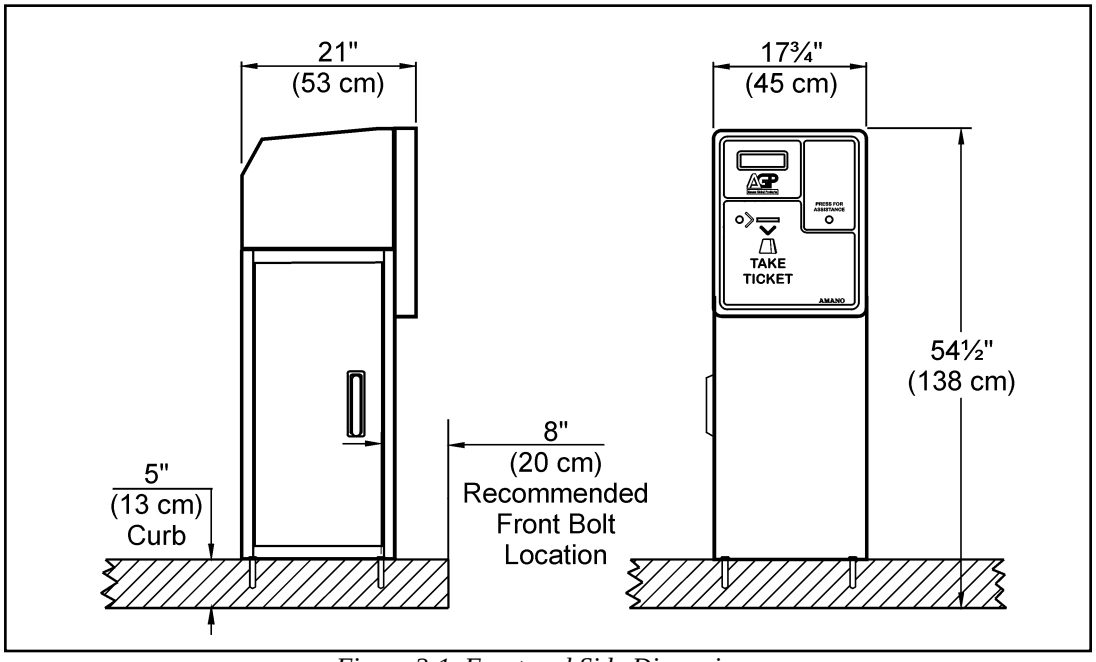


Figure 2-1, Front and Side Dimensions

Electrical

Power Source:	**Input Voltage**	**Service Amperage**	**Model Number**
	120VAC, 60 Hz	10 AMP	AGP-2010
	220VAC, 50/60Hz	5 AMP	AGP-2020
Fuses:	**Main Power:**	120VAC, 60 Hz	AGC - 5 Amp
		220VAC, 50/60Hz	AGC - 2.5 Amp
	RWPV Top:	GMCV - 5Amp 125 Volt Slo Blow	
	RWPV Bottom:	GDC - 1 Amp 250 Volt	

Warning: To reduce the risk of fire, replace with same type and rating of fuse:

Environment: -20°F ~ 120°F (-29°C ~ 49°C)
10% ~ 95% relative humidity (non-condensing)
Automatic thermostat-controlled heater included.

Standard Features

Tickets: 2 1/8” (54 mm) wide x 3 3/8” (85 mm) long x .007” (.188 mm) thick.
5000 tickets per carton
Refer to Amano’s Standard 3” Ticket Specifications (ATD-106900)

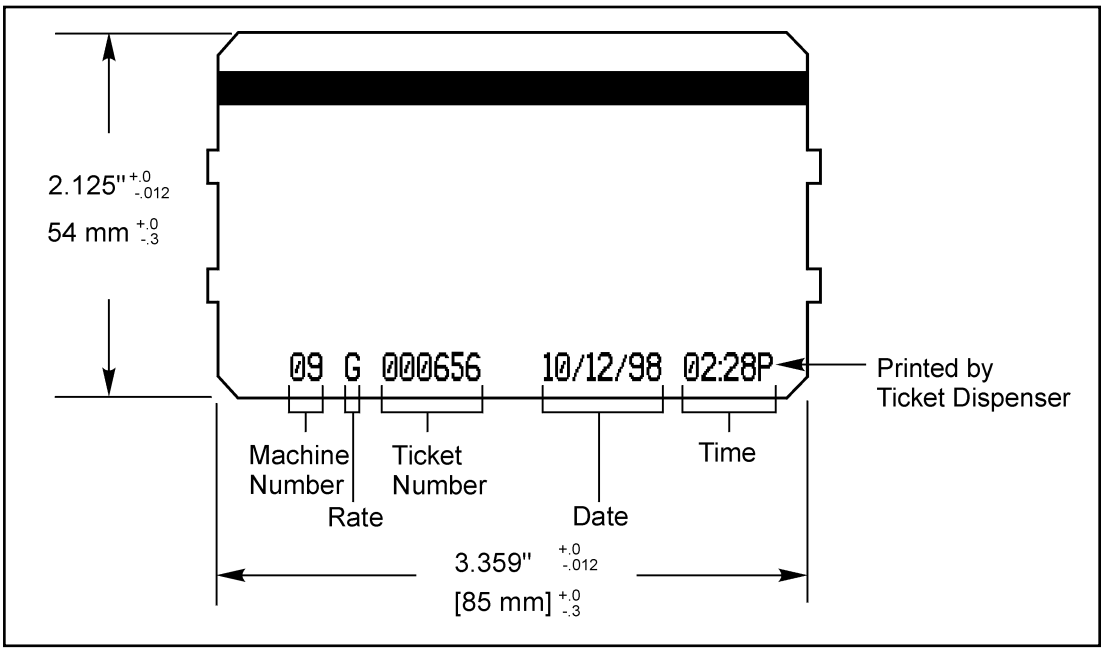


Figure 2-2, Example of a Standard Printed Ticket

Printer:
Dual Automatic ticket feed
9 x 7 dot matrix printer
Cartridge ribbon
Amano’s exclusive RWPV™
(read/write/print/vault) mechanism
Self sharpening cutter blade

Time:
Real time clock synchronization
Quartz clock accurate to ± 3 seconds per week @ 68°~86°F (20°~30°C)
Built-in perpetual calender
Automatic Daylight Saving Time adjustment

Programming:
On-line RS485 via local facility computer
Local via hand held wireless remote

Ticket Issue:
Manual: push button
Semi-automatic: vehicle presence and push button
Fully automatic: vehicle presence alone
Entry ticket and test ticket issuance
Automatic backout ticket voiding

Display:
Graphic LCD with backlight
Optional alternate language and graphics

Buttons:
Ticket Issue
Intercom

Standard Features

Loop Usage:	Selectable via programming Arming Loop (A) Closing Loop (C)
Memory:	999 transactions 1000 error messages 9999 pass cards
Vault Box:	50 ticket capacity Alarm activated when 100% full
Voice Unit:	Delivers pre-programmed verbal instructions to patrons Messages are user programmable Built in intercom for direct communication (Aiphone™ compatible)
Inputs:	Loop A Loop C Gate Status: Open/Closed Lot Full Disable Exit Gate Open
Outputs:	Arm Exit Reader Non-Resettable “Tickets Issued” Count Open Gate Close Gate Lot Full Ticket In Throat Ticket In Count Heater Fan Heater Elements

Note: Additional Inputs and Outputs are available. Refer to **I/O Rack #2 Connections** in Chapter 3.

Cabinet Design

Upper Mechanism

See Figure 2-3 below for the location of the following upper mechanism components:

1.	**Ticket Throat**	Ejects tickets
2.	**Printer Release Latch**	Access to clear ticket jams and change ribbon
3.	**Printer Motor**	Drives the printer ribbon
4.	**RWPV™**	Read/Write/Print/Vault (RWPV™) mechanism for tickets
5.	**Interface PCB**	Controls I/O functions of RWPV™ (motors, printers, etc.)
6.	**Main Logic PCB**	Controls all functions of the Ticket Dispenser
7.	**Dual Feed Mechanism**	Allows for dual ticket feed
8.	**Drive Gears and Belts**	Drives the RWPV™ mechanism
9.	**Ribbon Cartridge**	Easy to replace and cost effective
10.	**Printer Release Latch**	Access to clear ticket jams and change ribbon
11.	**Cover**	High impact weatherproof cover

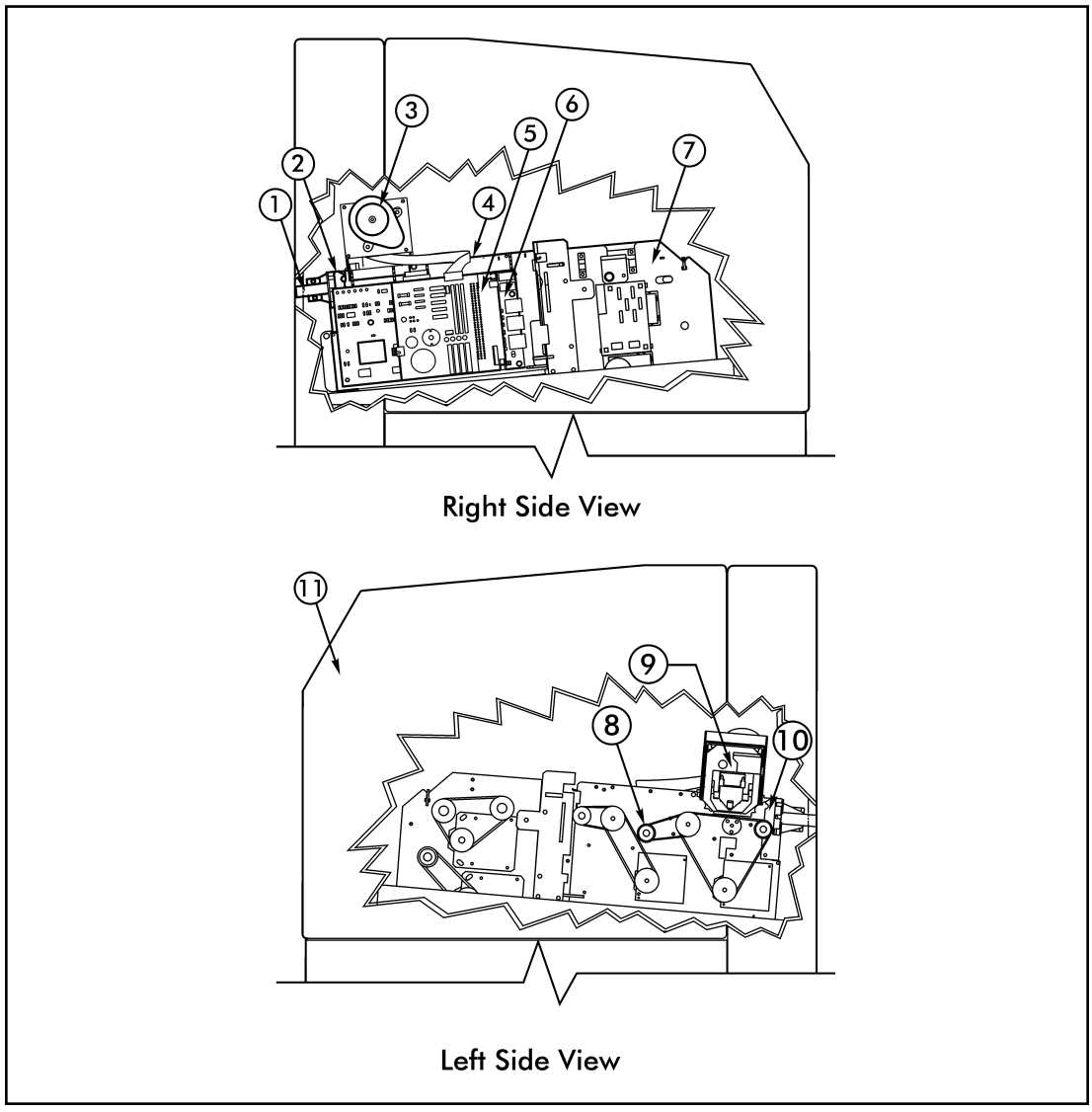


Figure 2-3, The Upper Mechanism

Lower Mechanism

See Figure 2-4 below for the location of the following lower mechanism components:

1.	**Cover**	High impact weatherproof cover
2.	**Rear Cover Latch**	Holds rear of cover in place
3.	**Thermal Package**	Thermostatically controlled heater
4.	**Interconnect PCB**	Communications interconnect with upper mechanism
5.	**Logic Power Switch**	Cuts off power to control circuits for service
6.	**Terminal Block (TB2)**	Low voltage field connections (24 VDC)
7.	**Main Power Breakers**	Cuts off power to entire unit for service
8.	**Main Power Box**	High voltage main power field connections
9.	**Ticket Carton Brackets**	Provides for dual ticket feed cartons
10.	**Ticket Bulb**	To keep ticket supply dry
11.	**Utility Power Outlets**	For powering peripheral devices
12.	**I/O Rack**	Facilitates expanded monitoring and intelligent control
13.	**Front Cover Latch**	Holds front of cover in place
14.	**Door Open Switch**	Activates door open alarm / door closed status signal
15.	**Vault Bin**	Holds vaulted tickets

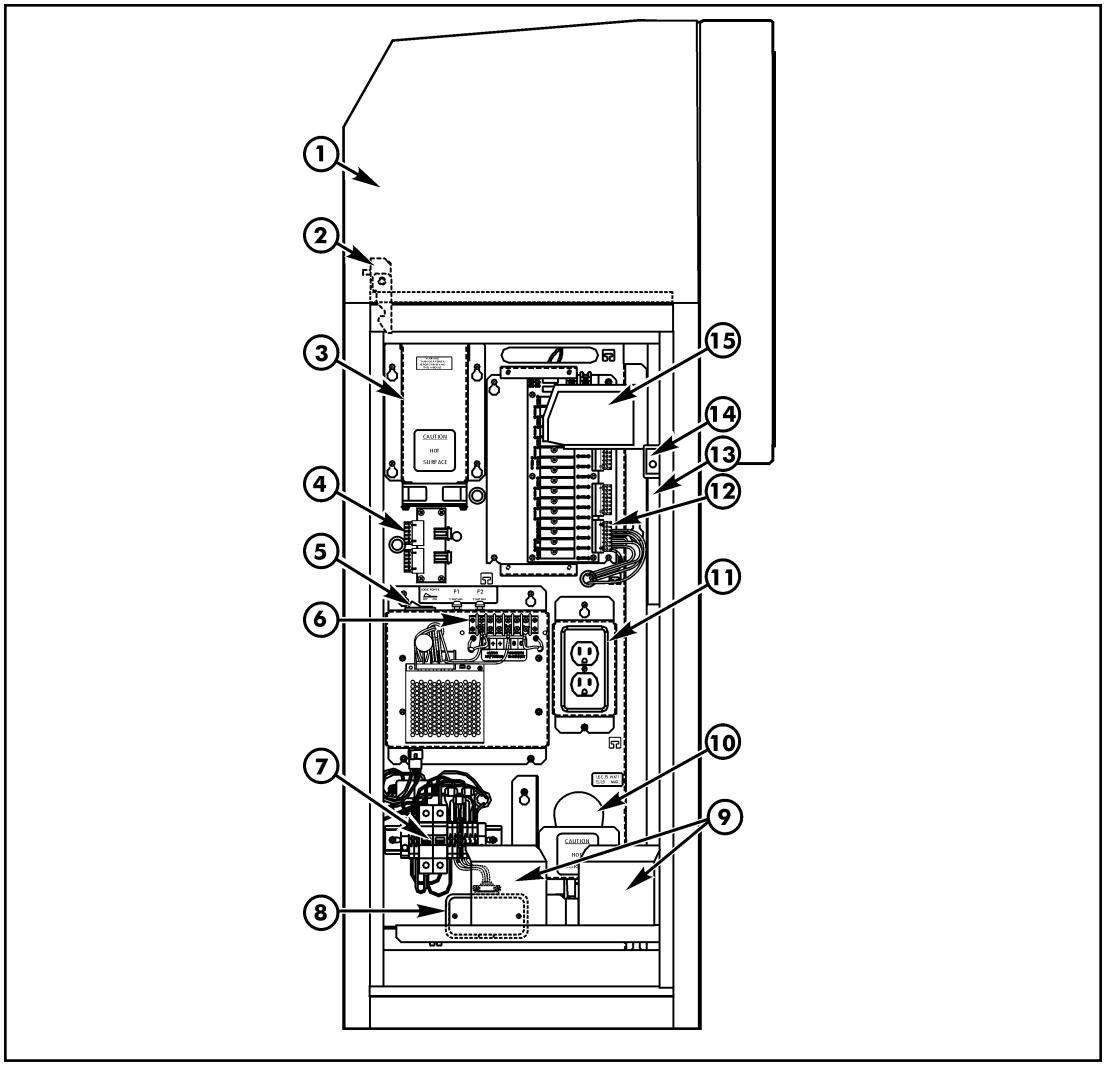


Figure 2-4, The Lower Mechanism

Chapter 3 : INSTALLATION

Prepare The Unit

After the AGP-2000 Ticket Dispenser has been received, confirm that all parts are included. Each AGP-2000 includes an envelope taped to the top cover containing keys, the ***AGP-2000 Programming Instruction Manual*** (ATD-107500) and this ***AGP-2000 Installation and Operations Manual***. Any accessory kit will be shipped separately, along with installation information. Notify Amano Cincinnati Inc. if any of these items are missing. Check the carton for shipping damage. If anything is damaged, notify the transportation company and file a claim. The transportation company is responsible for the shipment after it leaves the factory. The AGP-2000 Ticket Dispenser must be installed according to the instructions described in this manual. Failure to install the unit properly may result in voiding the warranty for repair or replacement of the unit.

Unpack the Unit

After you remove the shipping carton, unpack the internal components:

1. Unlock and open the side door panel if you have not already done so.
2. Pull the front cover release latch upward.
3. Pull the rear cover release latch towards the front of the unit.
4. Slide the cover up to open it. The cover can be removed if needed.
5. Remove the strap from around the front shaft of the printer mechanism.
6. Remove the vault box and remote control unit taped to the bottom plate of the unit and set them aside.
7. Remove the tickets from the ticket transport.
8. Close the cover and pull the front cover release latch downward to lock.

Remove The Skid

1. Unlock and open the side door panel if you have not already done so.
2. Locate the four threaded studs securing the AGP-2000 to the skid.
3. Remove the four 3/8” nuts and spacers from the mounting studs and set them aside.
4. Remove the AGP-2000 from the skid.

Mounting the AGP-2000

Follow the instructions outlined below to mount the AGP-2000 Ticket Dispenser. Check the location of the installed conduits and anchor bolts against the bolt layout drawing below. Make sure the conduits extend more than 1” (2.5 cm) high but do not extend more than 2” (5 cm) high. Conduits over 2” (5 cm) high will cause damage to components inside the Ticket Dispenser pedestal.

Two additional sets of mounting holes are provided so the AGP-2000 can replace other ticket dispensers without changing existing mounting bolts. The AGP-2000 directly replaces the ETP-10/20, ETP-12/22 and also CTP models if a galvanized base was previously used.

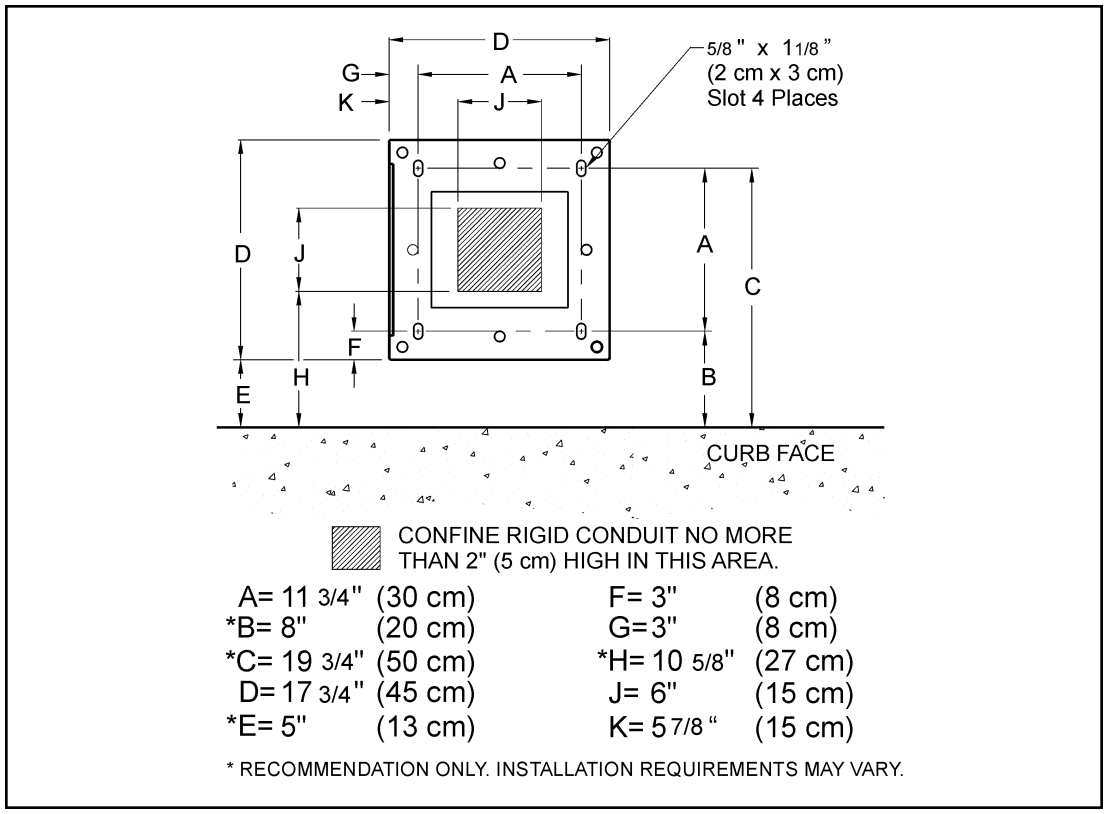


Figure 3-1, Bolt Layout

To mount the AGP-2000 in place:

1. Make sure the power source to the field wiring is disconnected.
2. Make sure the installed field wiring is located so that it won’t be pinched when mounting the AGP-2000.
3. Mount the AGP-2000 pedestal to the mounting bolts using the four ½ -13 nuts removed and set aside earlier. Make sure the AGP-2000 is mounted so that the front of the unit faces the traffic lane.
4. Make sure the MAIN POWER circuit breaker in the unit is turned OFF.
5. Proceed to make wiring connections as described on the following pages.

Electrical Connections

Main Power

The AGP-2000 power source must not drop below certain voltages, depending on the model of the Ticket Dispenser.

- A 120VAC model must not drop below 90VAC with a 7 ampere load.
- A 220/240VAC model must not drop below 180VAC with a 3.5 ampere load.

The AGP-2000 is equipped with a main power Field Connect Box. You must run conduit (rigid or flexible) from the field wiring conduit to the conduit connection provided on the bottom of the Field Connect Box. Refer to Figure 3-2 below.

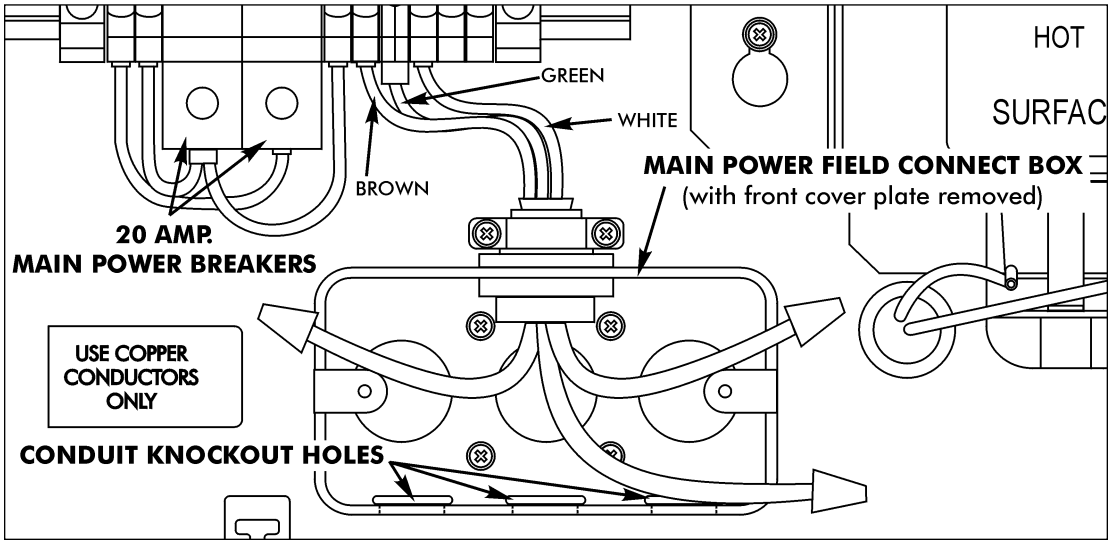


Figure 3-2, Main Power Field Connect Box with Cover Removed

1. ***Warning:*** Make sure the power source to the field wiring is disconnected.
2. Turn the Logic Power switch OFF.
3. Turn OFF both Main Power Breakers as shown above.
4. Remove the four phillips-head screws securing the ticket box bracket. Set the bracket and screws aside.
5. Loosen the screws securing the Field Connect Box cover. Set the cover and attached screws aside.
6. Remove one of the the Conduit Knockouts on the bottom of the Field Connect Box.
7. Run the main power and ground connections from the field wiring up through the Conduit Knockout Hole.
8. Make sure there is no more than 6” (15.24 cm) of field wiring inside the Field Connect Box to make connections with the internal wiring.
9. Use an NEC standard conduit connector to secure the main power conduit to the bottom of the Field Connect Box.
10. Connect the HOT wire from the field wiring to the BROWN wire in the Field Connect Box.
11. Connect the NEUTRAL wire from the field wiring to the WHITE wire in the Field Connect Box.

12. Connect the GROUND wire from the field wiring to the GREEN wire inside the Field Connect Box.
13. Replace the cover plate over the Field Connect Box.
14. Connect the power source to field wiring only after all terminal block connections have been made. (See the following sections.) Then proceed as follows:
15. Turn both Main Power Breakers ON.
16. Turn the Logic Power Switch ON. The switch will illuminate when it is in the ON position.

Connection Locations

Refer to Figure 3-3 below for the location of the Communication Interconnect PCB ①, the Field Connections Terminal Block TB2 ② and the I/O Rack ③. The illustration also shows the optional secondary I/O Rack (AGP-0502/A527) ④ installed.

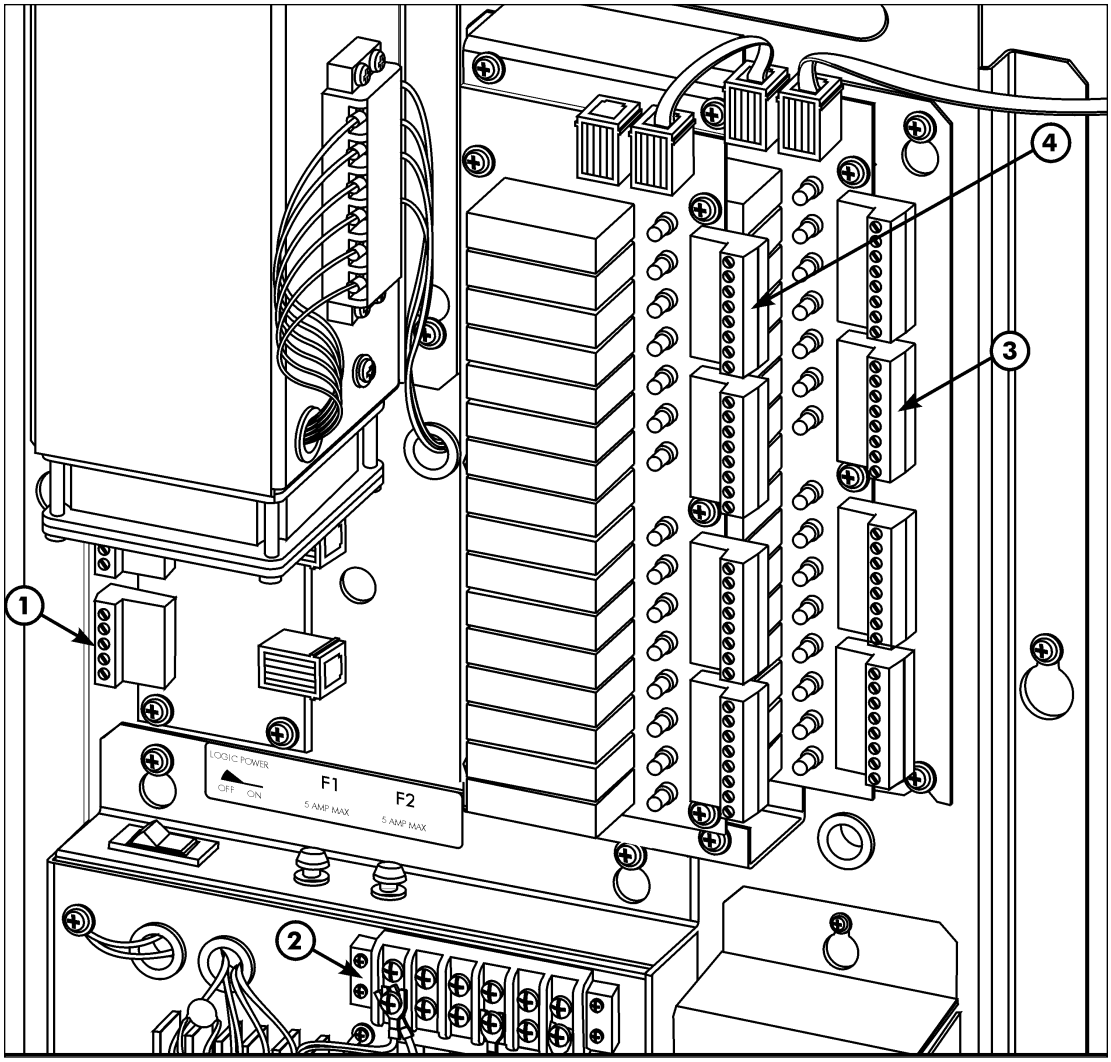


Figure 3-3, Field Connection Locations

Communications Wiring

This PCB provides RS485 communications connections from the host computer to the AGP-2000 if the unit is used in an on-line system (NEC Class 2 wiring only).

The communications wire shielding must be tied to earth ground only at the device location furthest from the host computer.

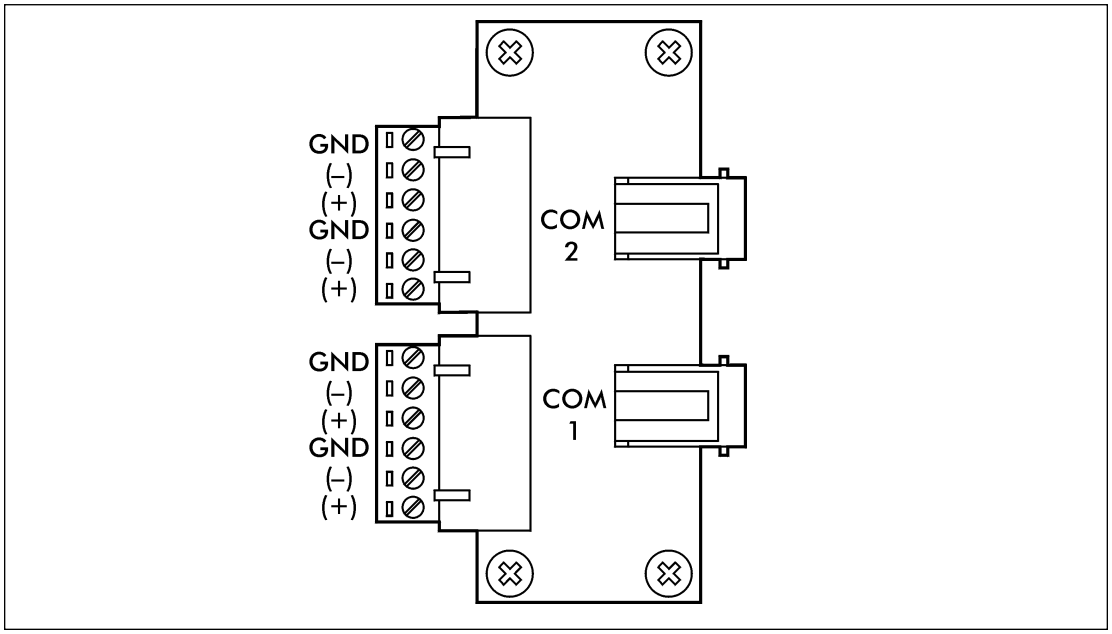


Figure 3-4, Communications Interconnect PCB

Termination Resistors

The AGP-2000 is equipped with Termination Resistors for Com1 and Com2. The Termination Resistors are mounted on the RWPV Main Logic PCB. The AGP-2000 is shipped with the Termination Resistors in the *terminated* (left) position. The Termination Resistors should remain in the terminated position if this is the last unit on the RS485 network. You must move the Termination Resistors to the *unterminated* (right) position if this is not the last unit on the RS485 network.

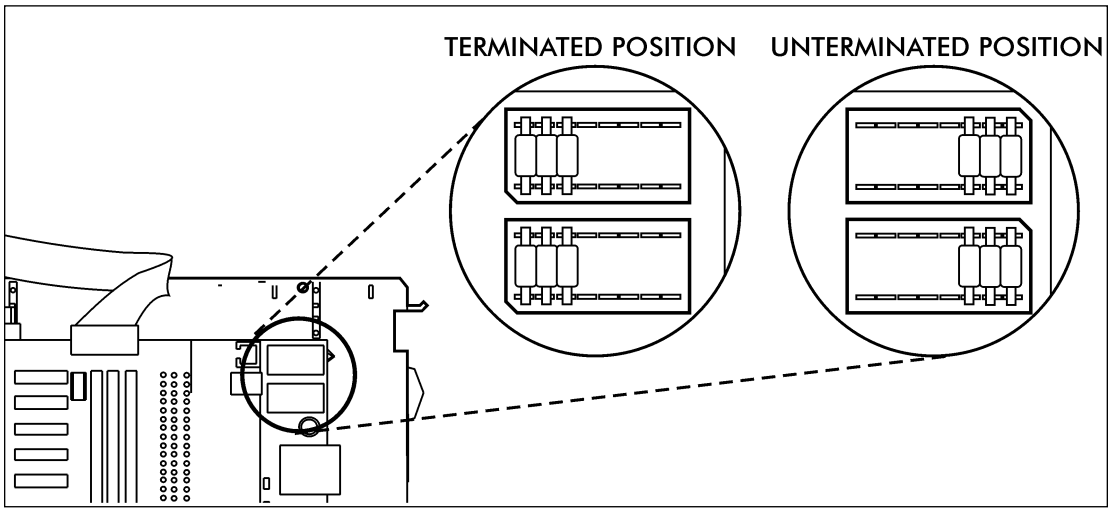


Figure 3-5, The Termination Resistors

Field Connections (24 VDC)

Refer to Figure 3-3 for the location of the Field Connections Terminal Block (TB2) shown below. This terminal block supplies +24 VDC and 0 VDC for I/O Rack connections (NEC Class 2 wiring only).

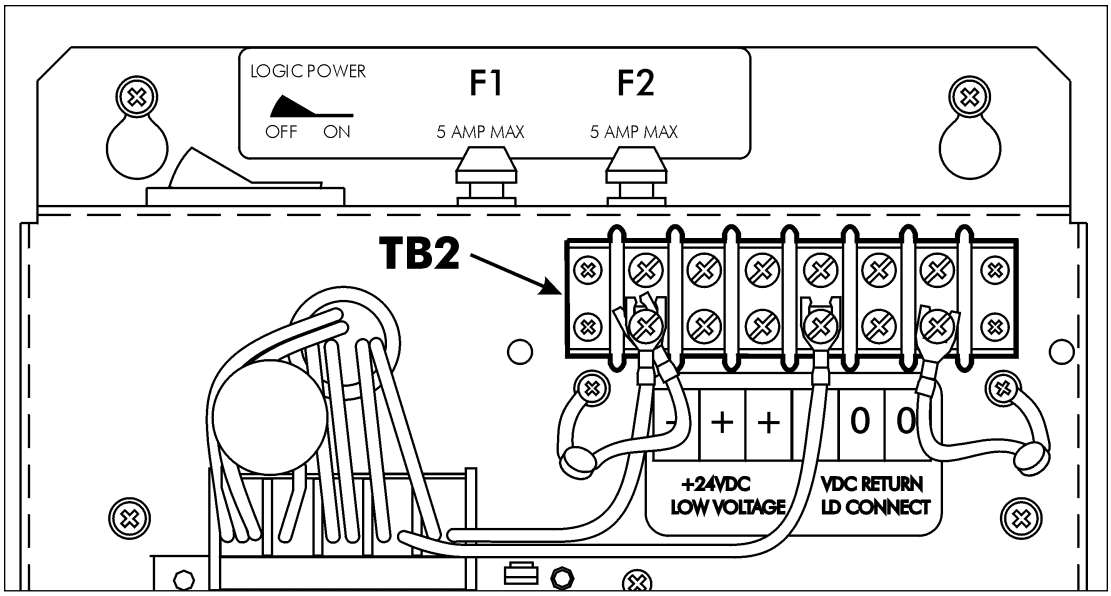


Figure 3-6, Field Connections Terminal Block TB2 with cover removed

I/O Rack #1 Connections and Jumper Settings

Refer to Figure 3-3 for the location of the I/O Racks. Figure 3-7 below illustrates I/O Rack #1 connections (NEC Class 2 wiring only) and Jumper Settings.

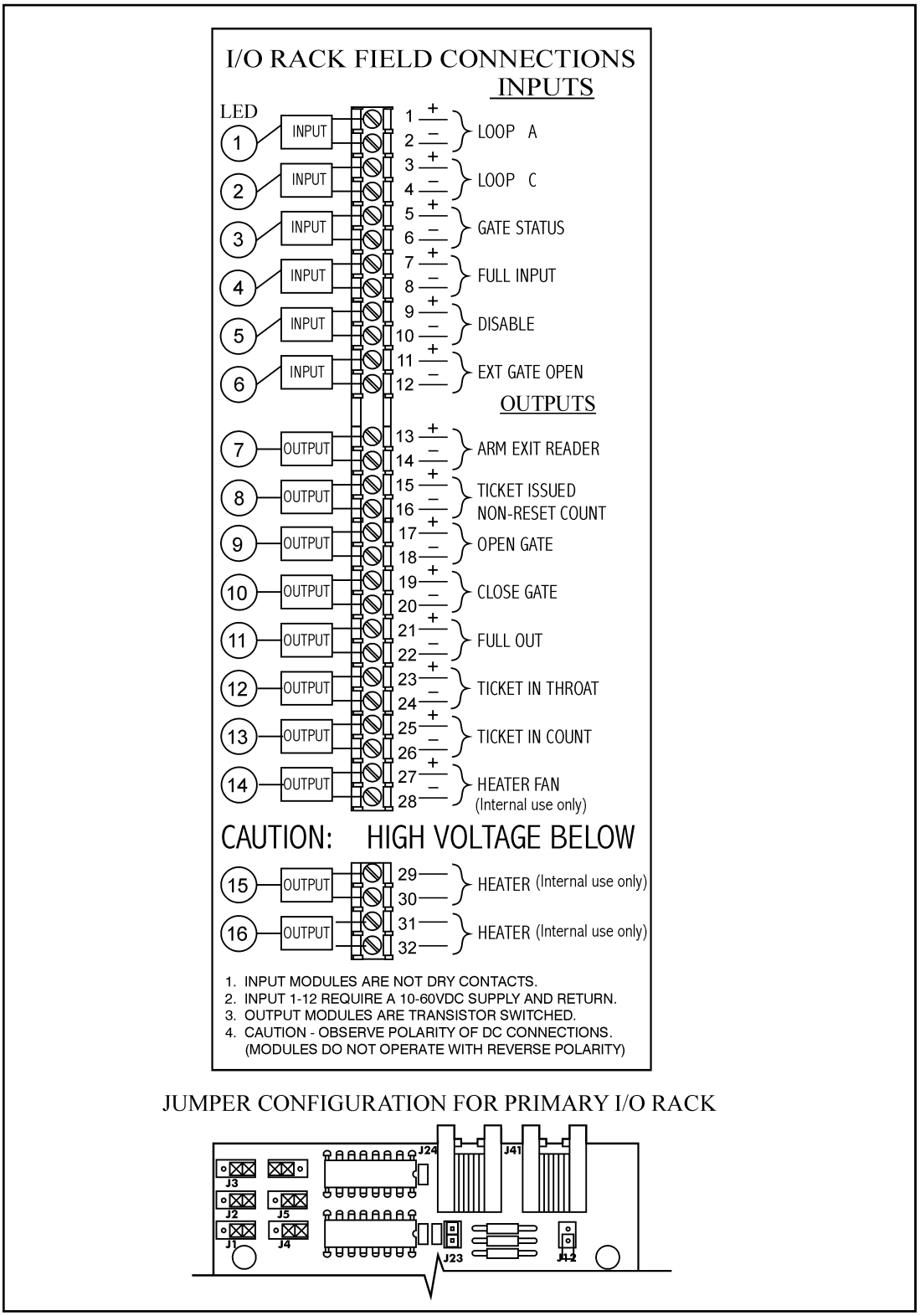

I/O RACK FIELD CONNECTIONS
INPUTS
LED
1 INPUT 1 + 2 – LOOP A
2 INPUT 3 + 4 – LOOP C
3 INPUT 5 + 6 – GATE STATUS
4 INPUT 7 + 8 – FULL INPUT
5 INPUT 9 + 10 – DISABLE
6 INPUT 11 + 12 – EXT GATE OPEN
OUTPUTS
7 OUTPUT 13 + 14 – ARM EXIT READER
8 OUTPUT 15 + 16 – TICKET ISSUED NON-RESET COUNT
9 OUTPUT 17 + 18 – OPEN GATE
10 OUTPUT 19 + 20 – CLOSE GATE
11 OUTPUT 21 + 22 – FULL OUT
12 OUTPUT 23 + 24 – TICKET IN THROAT
13 OUTPUT 25 + 26 – TICKET IN COUNT
14 OUTPUT 27 + 28 – HEATER FAN (Internal use only)
CAUTION: HIGH VOLTAGE BELOW
15 OUTPUT 29 30 HEATER (Internal use only)
16 OUTPUT 31 32 HEATER (Internal use only)
1. INPUT MODULES ARE NOT DRY CONTACTS.
2. INPUT 1-12 REQUIRE A 10-60VDC SUPPLY AND RETURN.
3. OUTPUT MODULES ARE TRANSISTOR SWITCHED.
4. CAUTION - OBSERVE POLARITY OF DC CONNECTIONS. (MODULES DO NOT OPERATE WITH REVERSE POLARITY)
JUMPER CONFIGURATION FOR PRIMARY I/O RACK
J3
J2
J1
J5
J4
J24
J41
J23
J42

Figure 3-7, I/O Rack #1 Connections and Jumper Settings

I/O Rack #2 Connections and Jumper Settings

Refer to Figure 3-3 for the location of the I/O Racks. Figure 3-8 below illustrates the optional I/O Rack #2 connections (NEC Class 2 wiring only) and jumpers. Order I/O Rack #2 as product #AGP-0502/A527. Installation instructions are included in the kit.

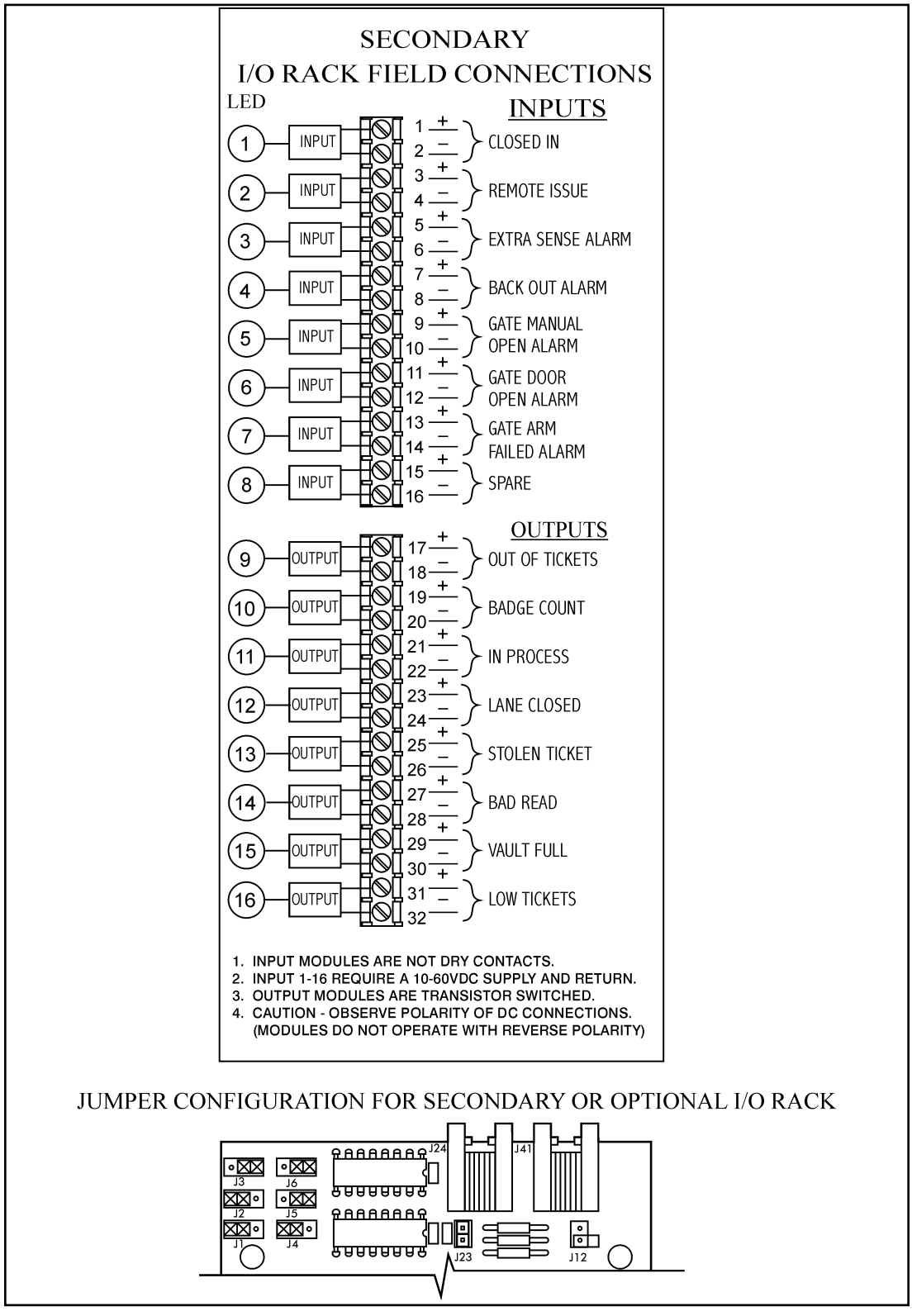

SECONDARY
I/O RACK FIELD CONNECTIONS
LED
INPUTS
1 INPUT 1 + 2 – CLOSED IN
2 INPUT 3 + 4 – REMOTE ISSUE
3 INPUT 5 + 6 – EXTRA SENSE ALARM
4 INPUT 7 + 8 – BACK OUT ALARM
5 INPUT 9 + 10 – GATE MANUAL OPEN ALARM
6 INPUT 11 + 12 – GATE DOOR OPEN ALARM
7 INPUT 13 + 14 – GATE ARM FAILED ALARM
8 INPUT 15 + 16 – SPARE
OUTPUTS
9 OUTPUT 17 + 18 – OUT OF TICKETS
10 OUTPUT 19 + 20 – BADGE COUNT
11 OUTPUT 21 + 22 – IN PROCESS
12 OUTPUT 23 + 24 – LANE CLOSED
13 OUTPUT 25 + 26 – STOLEN TICKET
14 OUTPUT 27 + 28 – BAD READ
15 OUTPUT 29 + 30 – VAULT FULL
16 OUTPUT 31 + 32 – LOW TICKETS
1. INPUT MODULES ARE NOT DRY CONTACTS.
2. INPUT 1-16 REQUIRE A 10-60VDC SUPPLY AND RETURN.
3. OUTPUT MODULES ARE TRANSISTOR SWITCHED.
4. CAUTION - OBSERVE POLARITY OF DC CONNECTIONS.
(MODULES DO NOT OPERATE WITH REVERSE POLARITY)
JUMPER CONFIGURATION FOR SECONDARY OR OPTIONAL I/O RACK
J3
J6
J2
J5
J1
J4
J24
J41
J23
J12

Figure 3-8, I/O Rack #2 Connections and Jumper Settings

Typical Input/Output Modules

The following figures illustrate typical Input and Output module schematics.

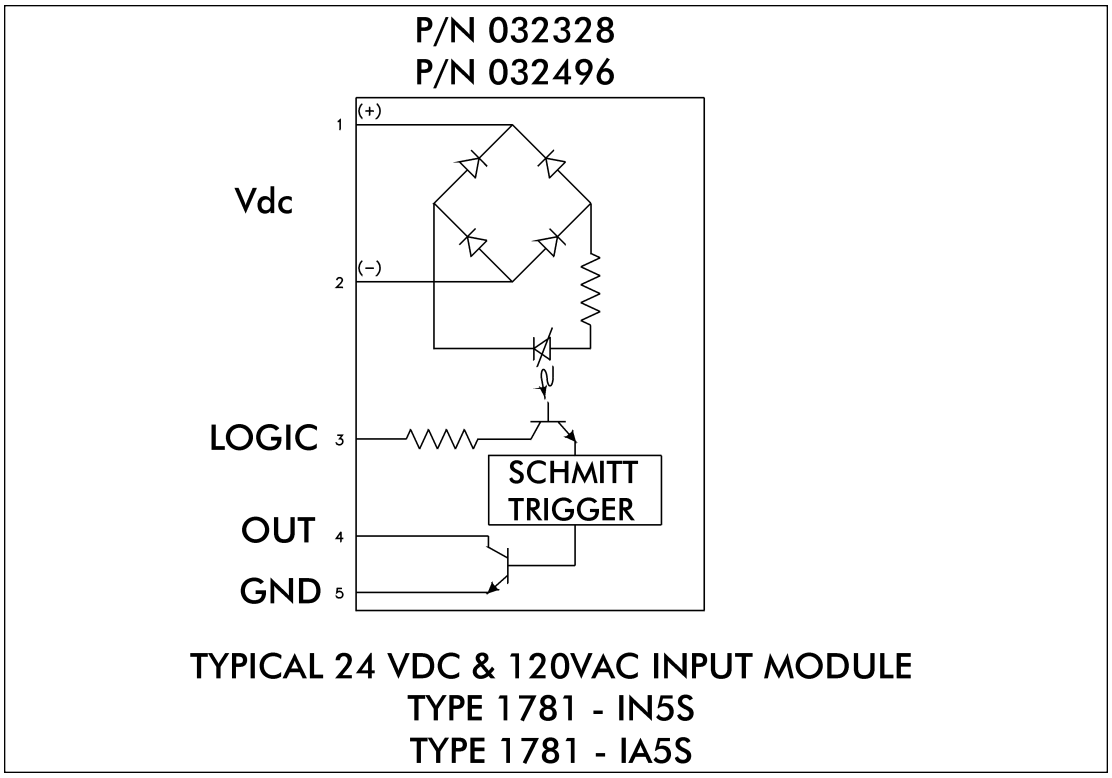


Figure 3-9, Typical 24VDC & 120VAC Input Module Schematic

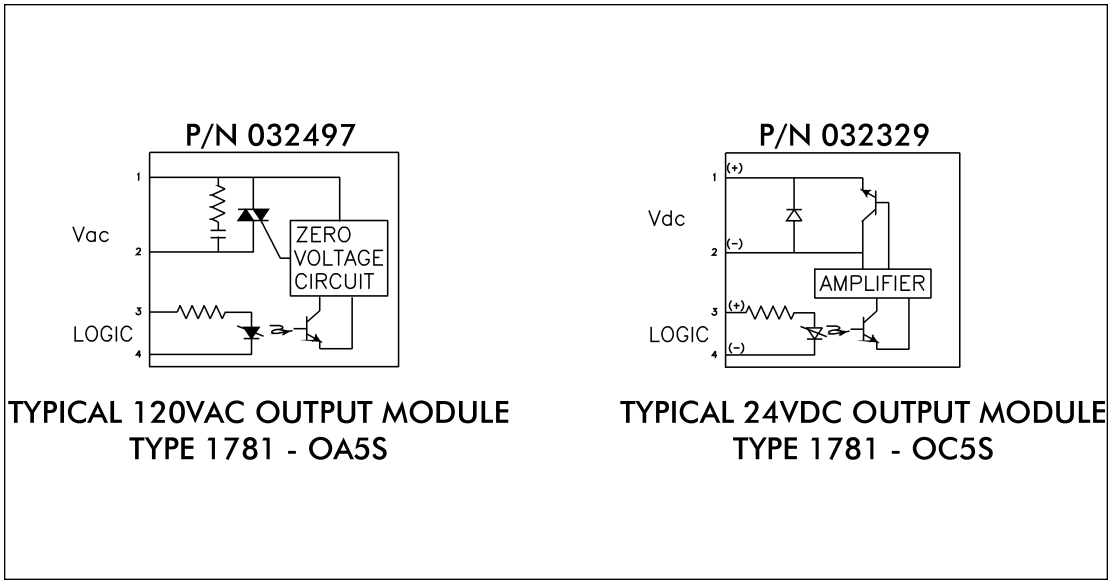


Figure 3-10, Typical 24VDC & 120VAC Output Module Schematics

AGP-2000 Connections to an AGP-1700 Gate

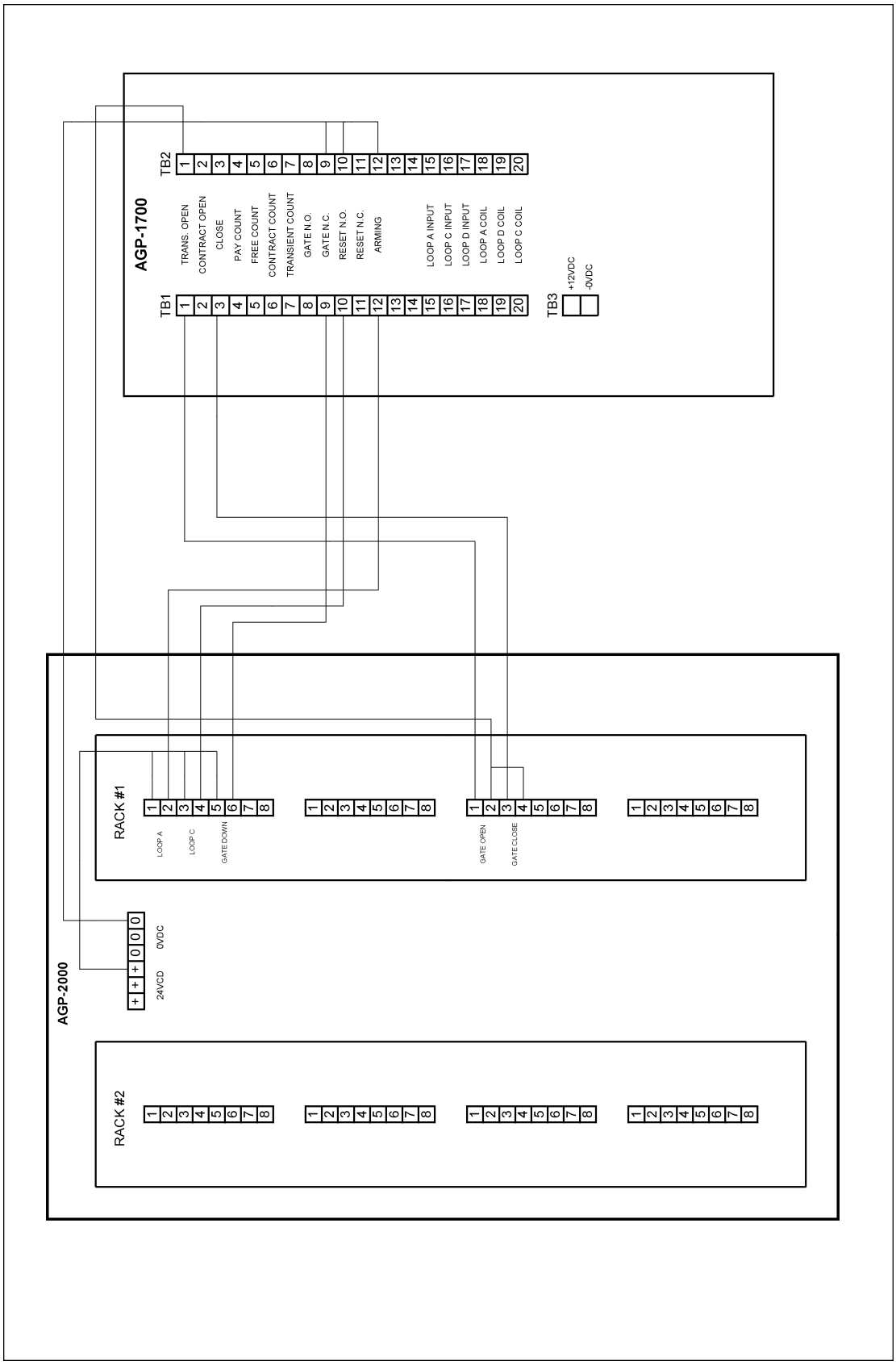


Figure 3-11, AGP-2000 Connections to an AGP-1700 Gate

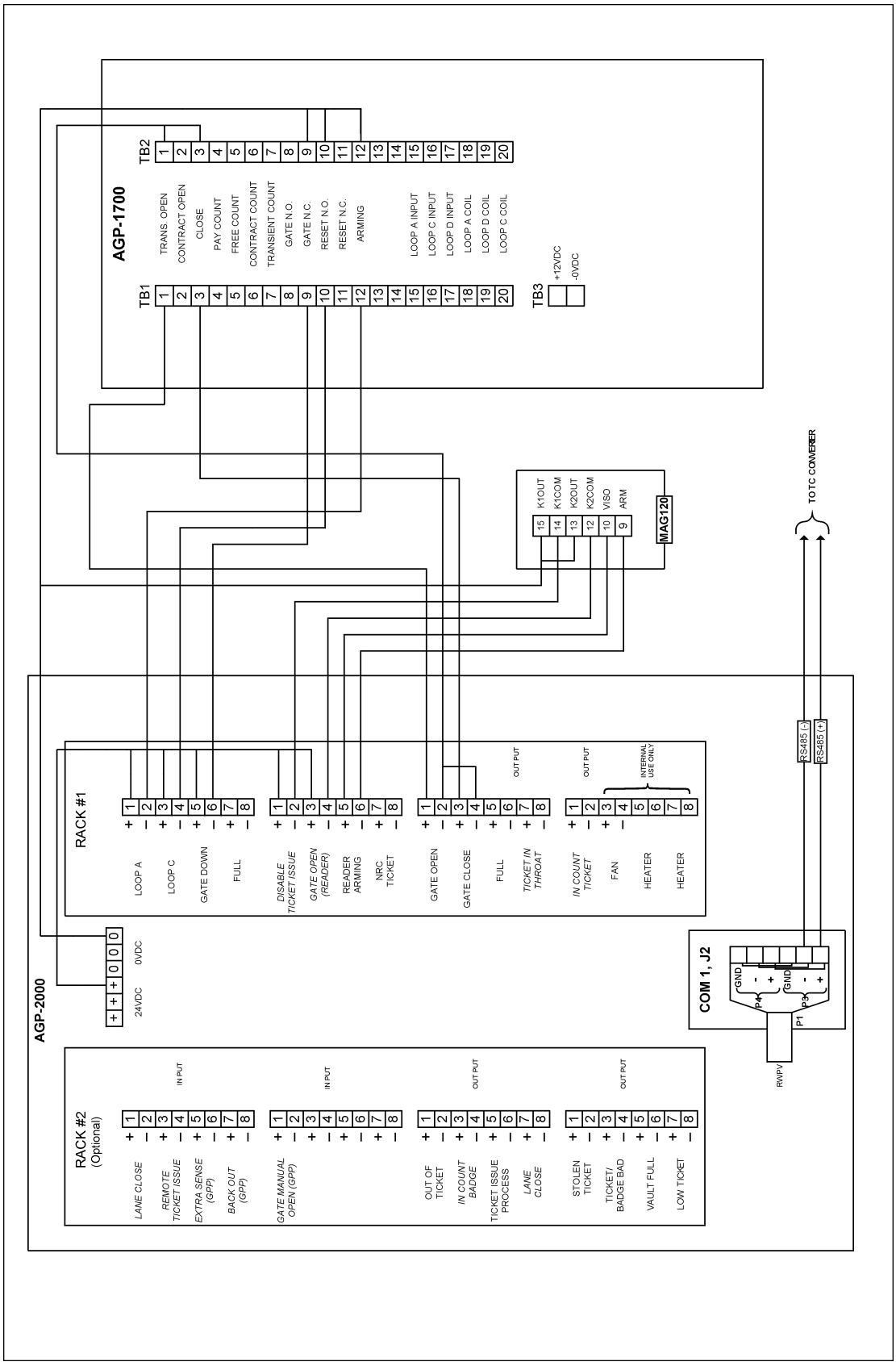


Figure 3 - 12, AGP-2000 Connections to an AGP-1700 Gate and MAG-120 Reader

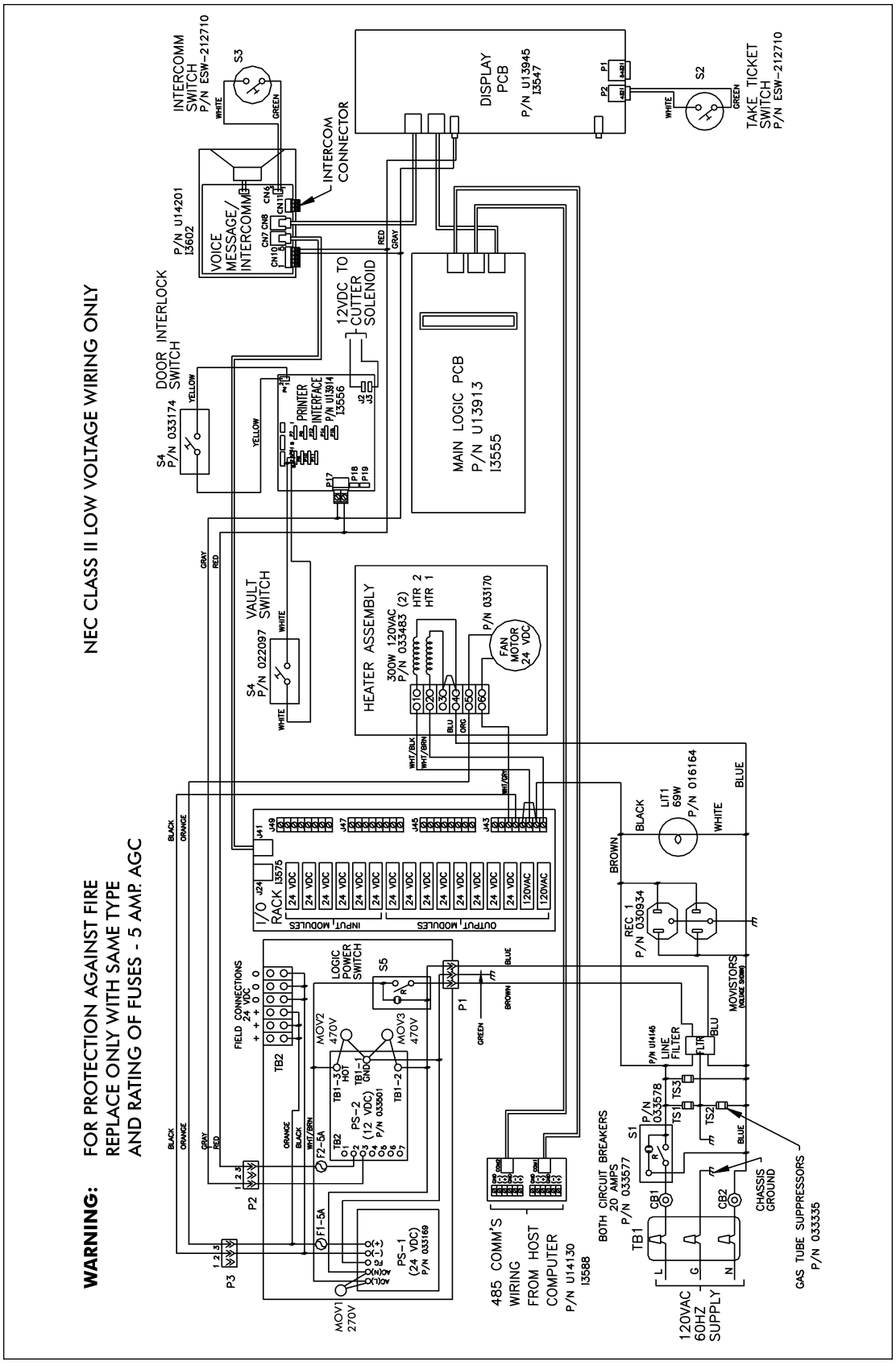


Figure 3-13, AGP-2010 Schematic

Loading the Ticket Supply

After the power and field wiring to the Ticket Dispenser have been connected, you are ready to load the tickets into the transport. Refer to Figure 2-4 for the location of installed ticket boxes.

1. Unlock and open the side door panel if you have not already done so.
2. Pull the front cover release latch upward and pull the rear cover release latch towards the front of the unit to release the top cover. Lift the cover.
3. Make sure the tie wrap and tickets have been removed from the printer mechanism.
4. Remove the top of the ticket box and discard.
5. Place the ticket box (or two ticket boxes if dual ticket feed [DTF] will be used) in the bottom ticket bracket.
   Place 3-inch ticket boxes in the machine so the words “Machine Tickets” are in the upper right of the box. Three-inch tickets will be fed into the printer mechanism with the preprinted numbers on top, towards the rear of the unit and the magnetic strip on the right as the tickets exit the machine.
6. Feed the tickets from the rear box into the rear opening of the ticket transport until resistance is felt. The machine will then grab the tickets and thread them into position automatically.

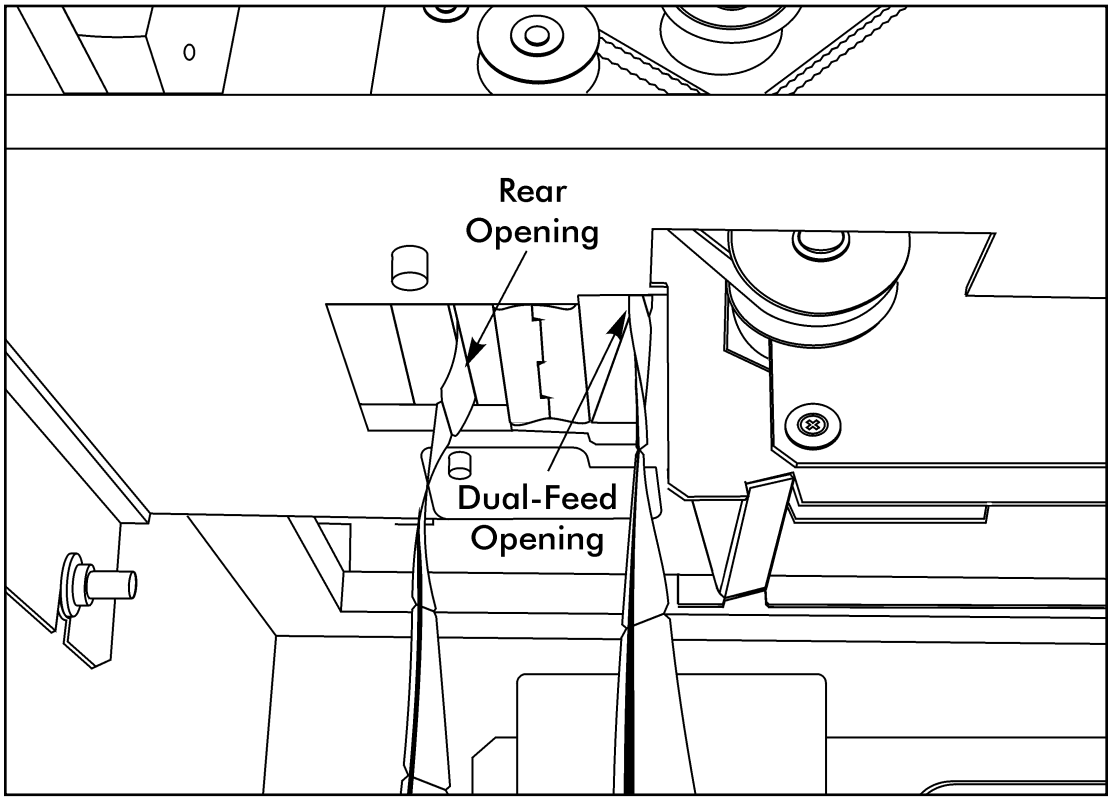


Figure 3-14 Loading 3-inch Tickets

7. If dual ticket feed is being used, repeat the procedure with stock from the second box, this time using the secondary feed in front of the main feed.

Intercom Wiring

If you are using the AGP-2000 internal intercom, follow the wiring diagram below.

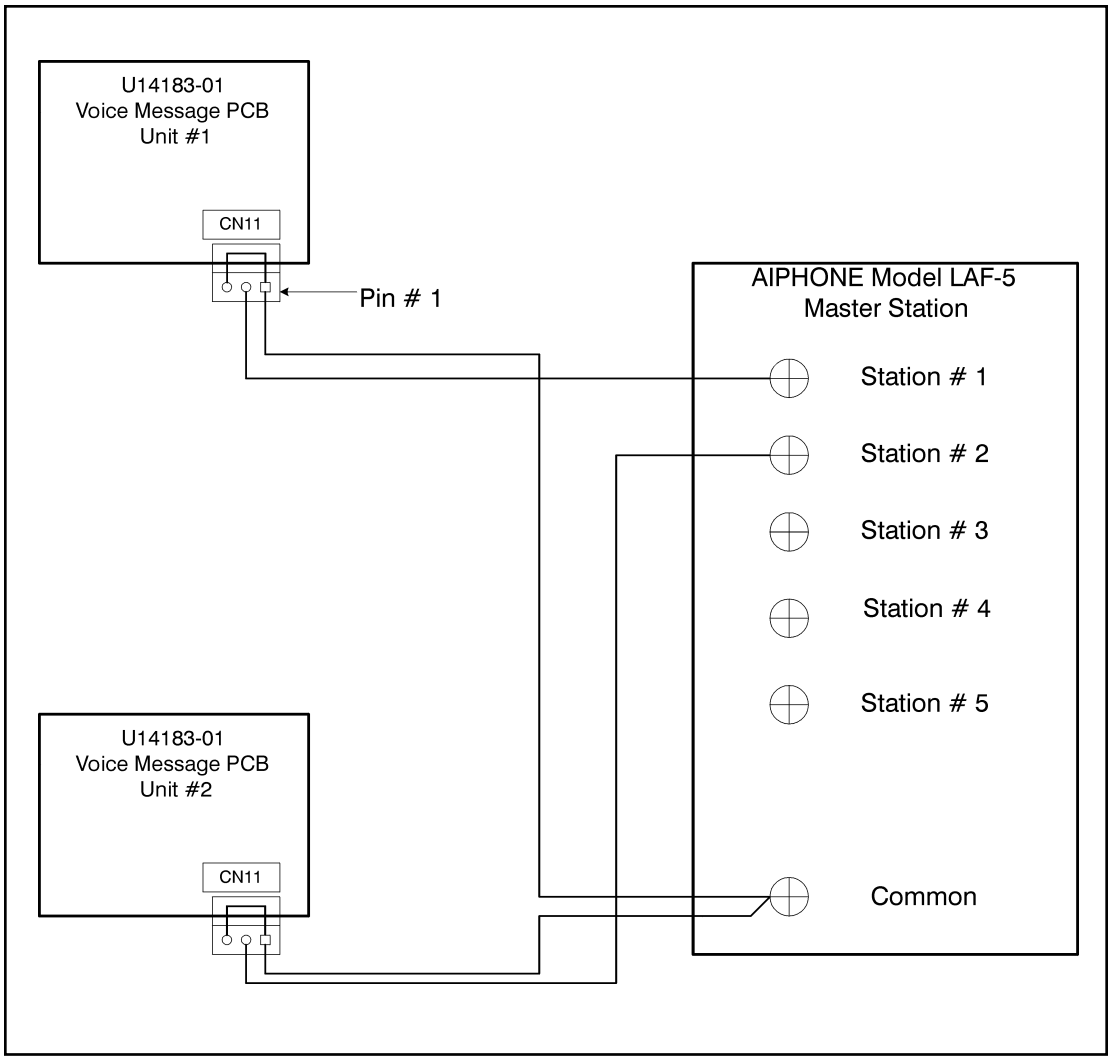


Figure 3-15 AGP-2000 Intercom Wiring Diagram

Complete the Installation

After wiring connections and ticket loading are completed, proceed as follows:

1. Hang the vault box next to the vault reset switch underneath the RWPV™ (Read, Write, Print, Vault) mechanism.
2. Refer to the ***AGP-2000 Programming Manual*** (ATD-107500) to program and test the unit.
3. After programming and testing the AGP-2000, close and latch the top cover, then close and lock the pedestal door.
4. Remove the protective covering from the front panel.

Chapter 4: SERVICE

Door Open Switch

The Door Open Switch is a safety switch inside the AGP-2000 cabinet. It activates the Door Open alarm and sends a Door Closed status signal to the system host. Figure 4-1 below illustrates the Door Open switch and its two positions.

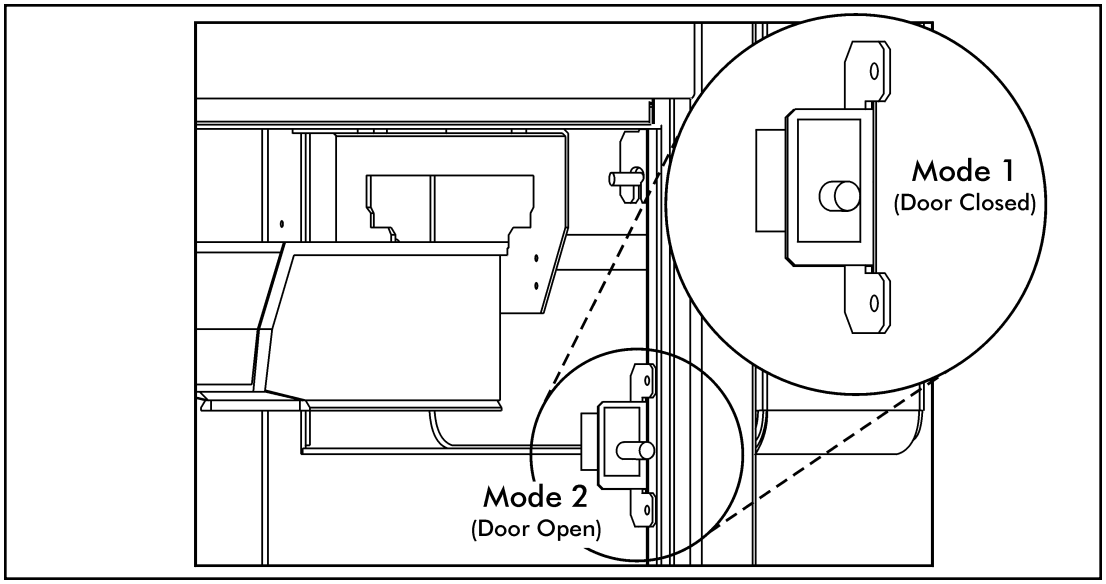


Figure 4-1, The Door Open Switch

Mode 1: When the door panel is in place, the switch is fully engaged for normal operation.

Mode 2: When the door panel is opened, the switch automatically extends to this position. The Door Open alarm is activated.

Ticket Jam Reset

The Door Open switch can also be used to reset the unit if a ticket jam has occurred. Refer to the Ticket Jam section in this chapter for more information.

Ribbon Replacement

To remove the old ribbon cartridge:

1. Unlock and open the side door panel if you have not already done so.
2. Pull the cover release latch upward.
3. Pull the rear cover release latch towards the front of the unit.
4. Slide the cover up to open it. The cover can be lifted off if needed.
5. Refer to Figure 4-2 below to locate the ribbon cartridge and white nylon retainer tabs securing the cartridge in place.
6. Pull back on the Printer Release Latches to tilt the printer up and back.
7. Pull up on the Top Retainer Tab to release the ribbon cartridge.
8. Push in the Bottom Retainer Tab while removing the cartridge.

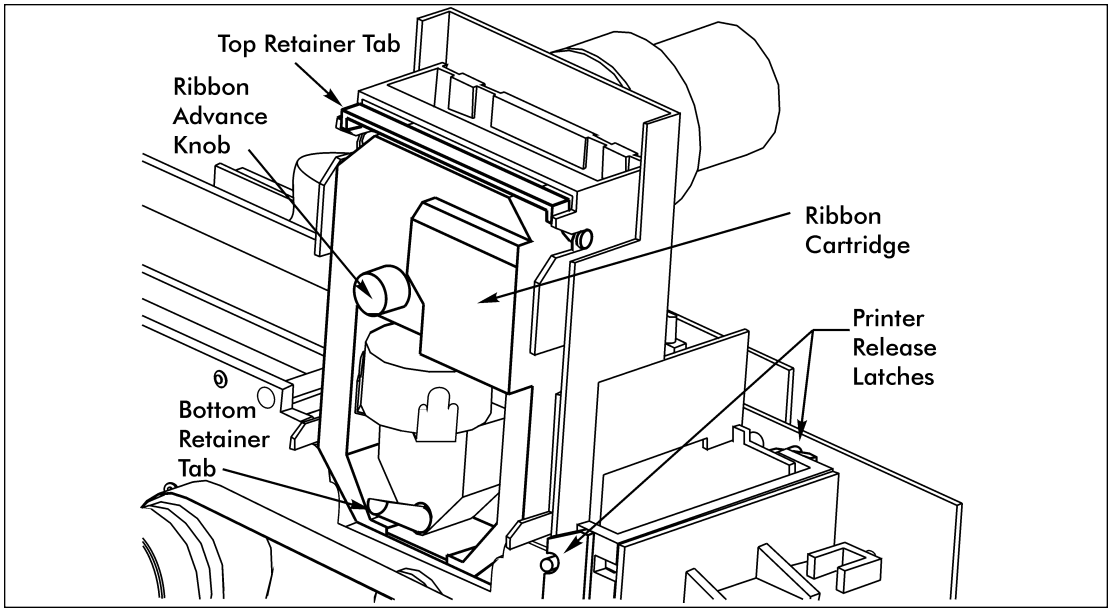


Figure 4-2, Replacing the Ribbon Cartridge

To install a new ribbon cartridge:

1. Turn the Ribbon Advance Knob on the new cartridge so that the ribbon is taut.
2. Pull back on the Printer Release Latches to tilt the printer up and back if you have not already done so.
3. Position the ribbon cartridge so that the adjustment knob is towards you.
4. Snap the ribbon cartridge into place passing the ribbon under the print head.
5. Make sure the cartridge is fully seated on both sides. Push down on the Top Retainer Tab to make sure it is securely fastened over the top of the cartridge.
6. Make sure the ribbon passes under the print head and is not twisted. Turn the adjustment knob on the front of the cartridge to tighten and straighten the ribbon.
7. When finished, tilt the printer assembly back into place and secure it with the release latches.
8. Close and lock the cover and door panel when finished.

Note: *Use only an RWPV ribbon (Amano part number CE-316250). This ribbon contains an ink tank which will assure long ribbon life (approximately 50,000 tickets). Generic ribbons may leak ink onto the platten, gum up the print head and not couple with the mechanism properly.*

Use of other than an Amano approved ribbon will void the warranty.

Ticket Jam

If a ticket should become jammed in the ticket transport, the display will indicate the following:

TICKET JAM	
10/17/99	06:39A

To clear the ticket jam, perform the following procedure:

1. Open the side door panel if you have not already done so.
2. Press and release the Door Open switch to reset the ticket jam. Press and hold the Door Open switch down again and observe the display. If the display does not return to normal, proceed as follows:
3. Locate the jammed ticket within the ticket transport.
4. Refer to Figure 4-3 below to locate the Printer Release Latches Ⓐ on both sides of the printer. Pull both of the latches forward to release the printer.
5. Tilt the printer assembly up and back Ⓑ.
6. Locate the pulleys on the left side of the upper mechanism Ⓒ. Rotate each set of motor driven pulleys to move the ticket towards the front or rear of the mechanism.
7. Grasp the jammed ticket and remove it from the mechanism.
8. Tilt the printer assembly back down and reset the latches.
9. Press and release the Door Open switch to reset the ticket jam.
10. Close and latch the top cover.
11. Close and lock the door panel.

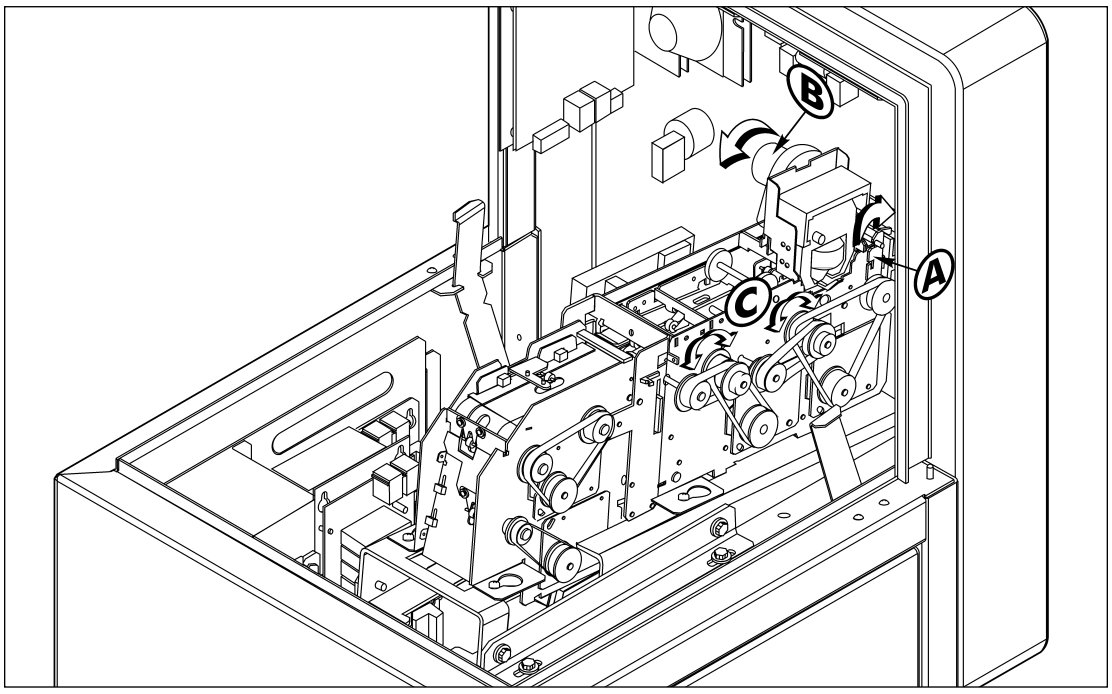
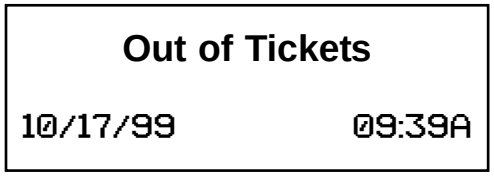


Figure 4-3, Clearing a Jammed Ticket

Ticket Restocking

A Low Ticket situation occurs when the primary box of tickets is depleted and the secondary box of tickets is being used. There is no indication on the display when the Ticket Dispenser is low on tickets. An Out of Tickets situation occurs when the AGP-2000 ticket supply is completely depleted. When the ticket dispenser is out of tickets the display will change to the following:



A Low Ticket alarm and an Out of Ticket alarm is available through the RS-485 communications lines or through the optional secondary I/O Rack (AGP-0502/A527).

To restock the tickets in the AGP-2000:

1. Unlock and open the side door panel.
2. Remove and discard the empty ticket boxes.
3. Remove the top of the new ticket boxes and discard.
4. Place one ticket box in each of the ticket box brackets. Place the boxes in the unit so that the words “Machine Tickets” are in the upper right corner of the box. The tickets will be fed into the ticket transport with the preprinted numbers towards the rear and bottom of the unit and the magnetic strip up and to the right as the tickets exit the machine.
5. Feed the tickets from the rear box into the rear opening of the ticket transport until resistance is felt. The machine will then grab the tickets and thread them into position automatically.
6. If dual ticket feed is being used, repeat the procedure with stock from the second box, this time using the secondary feed in front of the main feed.

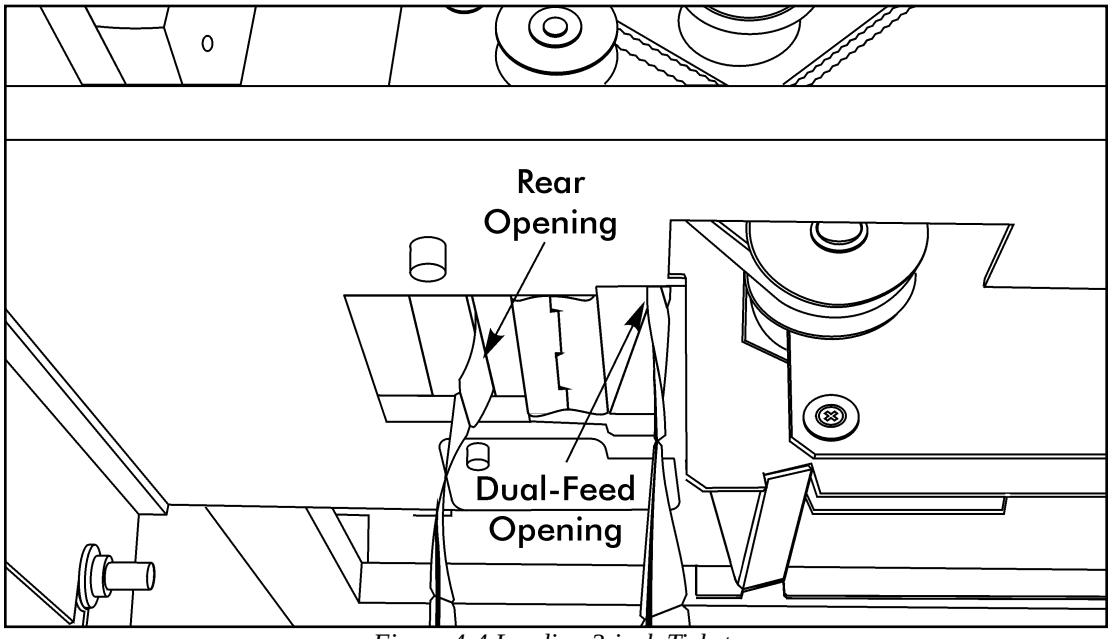
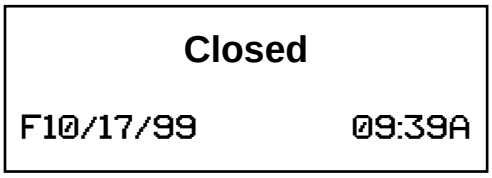


Figure 4-4 Loading 3-inch Tickets

To recover from a restocking misfeed:
If the tickets misfeed after restocking or while switching to a new box (dual ticket feed) the display will indicate the following:



The character F or B will appear in the first position of the date/time display. If an F appears, the misfeed has occurred in the Front, or Dual Ticket Feed opening of the transport. If a B appears, the misfeed has occurred in the Back or rear opening of the transport. To recover from the misfeed, perform the following procedure:

1. Make sure Loop A is clear.
2. Open the side door panel if you have not already done so.
3. Tear off the tickets from all ticket boxes.
4. Press and release the Ticket Issue button.
5. All motors in the RWPV will run until all the sensors are clear. Any tickets remaining in the RWPV will be ejected. Remove any rejected tickets.

Note: All RWPV motors will stop if the Ticket Issue button is pressed a second time. The display will show a TICKET JAM if the tickets are not removed. You may remove the tickets by hand if needed. (Refer to the previous section.)

6. The AGP-2000 will show an OPEN status unless it has been CLOSED due to another command.
7. Restock the tickets as described previously.
8. Close and lock the door.

Issuing Lost Tickets

If a customer loses a ticket, a replacement “lost ticket” is needed to validate the transaction at the exit. The AGP-2000 gives you the ability of issuing replacement lost tickets in advance. Follow the instructions below to issue lost tickets.

1. Unlock and open the door panel.
2. Press the ticket issue button for each lost ticket needed. The tickets issued will have the words “LOST TICKET” printed on them.
3. Close and lock the door panel when you are finished.

Emptying the Ticket Vault Bin

The AGP-2000 is equipped with a ticket vault bin to store retracted and vaulted tickets. Tickets are retracted when a backout situation occurs or when the ticket issue timer has run out. When the internal Ticket Vault Counter reaches 50 tickets, the AGP-2000 will no longer issue tickets and the display will change to the following:

CLOSED	
V10/17/99	09:39A

To recover from a full ticket vault bin and a “CLOSED” status, perform the following procedure:

1. Use the keys provided to unlock and open the door panel.
2. Locate the ticket Vault Bin shown in Figure 4-5. Remove the bin and all vaulted tickets.

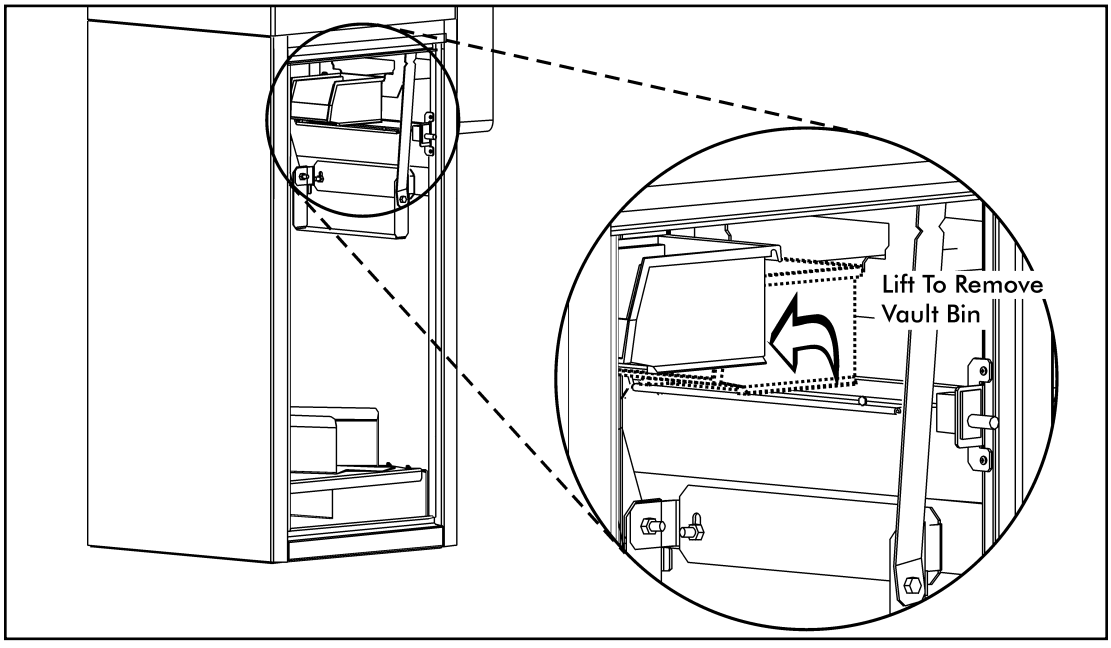


Figure 4-5 Removing Vault Bin

3. Your AGP-2000 is equipped with a ticket Vault Bin Reset Switch, located on the vault bin bracket. You may have a push-button type switch located in the corner of the bracket, or a roller-ball type switch located in the center of the bracket. If the push-button switch is present, you must press the switch to reset the internal ticket vault counter to 0. If your AGP-2000 is equipped with the roller-ball type switch, the counter is reset automatically when the bin is removed.
4. Replace the vault bin.

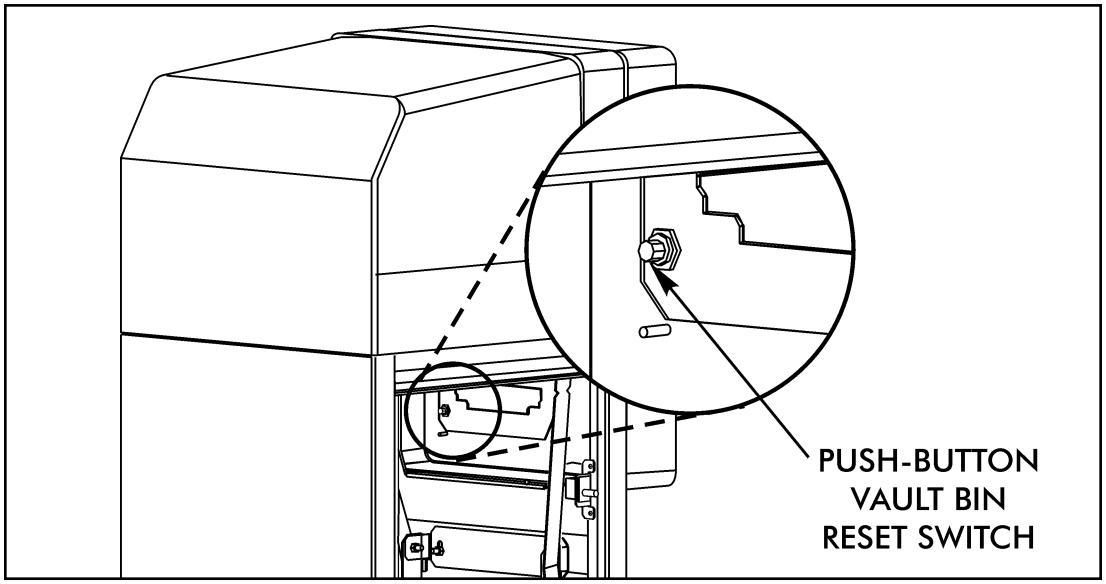


Figure 4-6, The Vault Bin Reset Switch

Preventative Maintenance

In order to keep your AGP-2000 running efficiently, Amano recommends that you perform the following Preventative Maintenance procedures:

RWPV™: Use commercially available canned or compressed air to periodically blow out dust buildup from the read/write/print/vault mechanism. This includes the dual ticket feed module, ticket transport, rollers, optic sensors, printer mechanism and ticket throat.

Magnetic Head: Periodically unlatch and open the printer mechanism to clean the magnetic head with a cotton swab and isopropyl alcohol.

Rubber Rollers: When any of the rubber rollers require cleaning, **do not use alcohol**. Alcohol dries out rubber and will cause deterioration of the rollers.

Use a cleaner specifically formulated for rubber, such as MG Chemical's® "408A Rubber Renue" or Rawn™ Company's “Re-Grip” and a cotton swab.

Servicing the PCBs

Refer to Figure 2-3 to locate the Interface PCB and Main Logic PCB, located on the right side of the mechanism. The PCB's may require removal for replacement or service purposes.

Note: Turn the Main Power Breakers off before removing either circuit board. Use the appropriate static protection when handling the circuit boards.

To remove the Interface PCB:

1. Label each cable connected to the Interface PCB with the corresponding connector designator (P1 - P12, etc.)
2. Disconnect each cable.
3. Locate the mounting screw located in the center of the PCB, near the sensor connector.
4. Use a phillips-head screw driver to remove the mounting screw and set it aside.
5. Pull the circuit board straight out, unplugging it from the main PCB.
6. To replace the Interface PCB, reverse this procedure.

To remove the Main PCB:

1. Remove the Interface PCB as outlined above.
2. Disconnect the printer cable.
3. Remove the threaded standoff in the center of the PCB and set it aside.
4. Locate and remove each of the four mounting screws securing the circuit board.
5. Set the screws and other hardware aside for future use.
6. To replace the Main PCB, reverse this procedure.

System Reset

Program Reset

The AGP-2000 program can be reset to the default values if needed. A System Reset is accomplished through the Test Mode.

1. Press the **POWER** button on the remote control unit.
2. Press **2** to enter the Test Mode.
3. Enter your four digit password and press the **VOL DOWN** button.
4. Press **7** to enter the System menu.
5. Press **2** to select RESET.
6. Press **1** for YES if you wish to RESET the program.
   Note: All program parameters will be reset to the AGP-2000 default values.
7. Press the **VOL DOWN** button to Reset the AGP-2000 Program and return to the Main Test menu.
8. Press the **POWER** button to return to the Normal Mode.

Clearing the Ram

If it becomes necessary to completely clear the memory and return the system to it's default configuration, you must temporarily disconnect the battery located on the back of the Main PCB as follows:

1. Turn off the machine
2. Disconnect the comms cables (see Figure 3-4).
3. Using needle nose pliers, carefully pull the negative battery lead from its socket.

   Caution: *Use extreme care to make sure neither the pliers or the battery lead contacts any runs on the circuit board.*
4. Wait at least 5 seconds and carefully re-insert the lead into its socket, connect the comms cables and turn on the machine.

AMANO CINCINNATI, INC.

A Company of the AMANO Group/Yokohama
140 Harrison Avenue, Roseland, NJ 07098
Technical Support: (800) 526-2559

Atlanta Sales Office
(770) 587-1082 • (800) 554-1031

Chicago Sales Office
(847) 718-1100 • (800) 323-8864

Cincinnati Sales Office
(513) 697-9000 • (800) 487-7564

Dallas Sales Office
(972) 241-09146 • (800) 527-4037

Los Angeles Sales Office
(714) 970-2280 • (800) 854-5977

New Jersey Sales Office
(973) 403-1900 • (800) 526-2559

Toronto Sales Office
(905) 624-4085 • (800) 387-3388

ATD-105002 • Copyright © 2000 • Printed in U.S.A. • 7/00/0